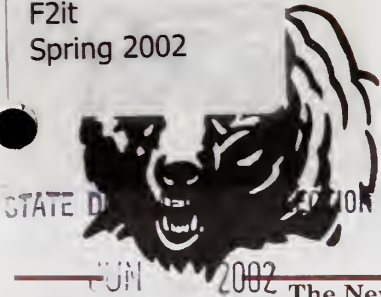


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Spring 2002



# Montana Fish, Wildlife & Parks

INSIDE  
TRACKS

JUN 2002

The Newsletter of Region One

Volume 12, Number 1

Spring 2002

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## SPECIAL ELK ISSUE

When you live in northwest Montana, the word elk conjures up many images for a broad spectrum of people. We have passionate elk hunters and elk watchers throughout the region. Elk and other wildlife are part of our culture here in

the northwest corner of this great state.

The Montana Fish, Wildlife & Parks Commission has directed FWP to update and/or rewrite our statewide elk management plan. Also, our northwest Montana Citi-

zen Advisory Committee has advised us to use this planning opportunity as a pilot project to increase communication between FWP and elk hunters in Northwest Montana.

This special issue of Inside Tracks contains some detailed information that relates to our regional elk harvest surveys and elk population flights. We provide you with some explanations of recent elk hunter and harvest trends and also relate them to elk herd condition. We also provide some interesting elk facts and figures that will enhance your knowledge of elk biology whether you are an avid elk hunter or just enjoy hearing a bull bugle on a crisp autumn morning. 

## Elk Survey Data

Each spring biologists for the Montana Fish, Wildlife & Parks conduct aerial surveys to classify a sample of elk in any given hunting district. These surveys classify the number of cows, calves and bulls in the population. In addition, the bulls are further broken down to spikes, which are yearling bulls, and bulls with larger antlers, generally at least two years of age or older. These are called brow-tined bulls. This can be done because yearling bulls have not yet shed their antlers. Once com-

pleted, a ratio between the number of calves and cows and a different ratio between bulls and cows can be figured. These are called the calf-to-cow and bul-to-cow ratios and sometimes are stated as the number of calves or bulls per 100 cows.

Surveys in Region One are conducted by helicopter. Spring is the ideal time for observing elk in the region because of a condition called spring green-up. This "green-up" phenomena is the stage of plant

*(Continued on Page 2)*

**ELK SURVEY.**  
*How many elk can you spot in this aerial survey photo in Hunting District 121? Spring green-up brings aerial surveys to track the elk population in Montana.*



### IN THIS ISSUE

- SPECIAL ELK ISSUE
- ELK SURVEY DATA
- BORN TO BE BIG
- SURVIVAL PACKETS DONATED FOR HUNTER EDUCATION
- ABOUT THE FISH, WILDLIFE & PARKS COMMISSION
- ELK HARVEST DATA
- YOUTH ELK HUNT IS NEW OPPORTUNITY
- HUNTER EDUCATION INSTRUCTORS MARK 45 YEARS OF TEACHING
- ELK FOOD AND ELK TALK

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# Elk Survey Data

(Continued from Page 1)

growth were plants, mostly grasses in this case, come out of winter dormancy and start to grow and become green with new spring growth. This new green vegetation attracts elk in large numbers, and since the phenomenon starts in the valley and on open hillsides they are easily observed and can be readily counted. To help maximize the number of elk seen these surveys are flown during the first hours of light in the morning and then again during the late evening. These spring "green-up" surveys are best completed during a two to three week period around the middle of April.

Hunting district 121 near Thompson Falls was chosen for comparison because it has a long history of completed survey data and is one of the largest districts, based on square miles found in the region (see survey table). It is also one of the premier elk hunting districts in Region One with a large elk population and number of elk harvested.

The survey data is represented in groups of three year time periods. The survey data from 1993 through 1995 is pre brow-tined bull only seasons and the data from 1999 through 2001 is post brow-tined bull only seasons. These numbers represent the actual number of animals ob-

served during the survey flight and do not represent the total elk population for the hunting district. The survey data when compared to several years of data is called a trend. These three-year periods were then averaged. Averaging helps to alleviate some of the peaks and valleys of the data set. Several hunting districts went to a brow-tined bull only season in 1996 and most of the remaining hunting districts went to this season structure in 1998.


When we compare the averages of survey data before and after the establishment of the brow-tined bull season we can observe several

***'It is interesting to note that the number of spike elk observed during the surveys has remained about the same, 54 vs. 57.'***

changes. The number of cows observed during surveys has increased significantly in the last three years. The number of calves produced and recruited into the population has also increased. This is primarily due to the mild winter and the increase in the number of cows in the population. The calf-to-cow ratio has remained fairly constant for both periods. A calf-to-cow ratio in the low 30s is considered good for this

area. You can also observe that the overall elk population in HD 121 has increased over the last three years. The survey reveals a population that has increased about 16 percent.

It is also interesting to note that the number of spike elk observed during the surveys has remained about the same, 54 vs. 57. One would expect this number to increase considerably during the past three years because these spike bulls are not being hunted and recruitment has been consistent. Two scenarios could explain this observation. First, we know that there is a large amount of natural mortality in the yearling bull age class. Second, these spike bulls could be illegally shot during the hunting season. We do know that they are not being observed during the spring aerial surveys.

Another result from the survey data is the decrease in the number of brow-tined bulls being observed. This probably can be explained through the brow-tined bull only hunting season. Remember, all of the legally harvested bulls are coming from this group. The bull-to-cow ratio has decreased as well but since this is a ratio it is being strongly influenced by the large increase in cows observed during the survey. 

## Surveys (Flights)

HD 121 (West Clark Fork)	Year	Cows	Calves	Spiques	BTB	Total Bulls	Uncl.	Total Elk	Calves: 100 Cows	Bulls: 100 Cows
	1993	763	194	79	82	161	33	1151	25.4	21.1
	1994	501	152	48	78	126	24	803	30.3	25.1
	1995	487	186	34	62	96	99	868	38.2	19.7
	<b>Avg.</b>	<b>584</b>	<b>177</b>	<b>54</b>	<b>74</b>	<b>128</b>	<b>52</b>	<b>941</b>	<b>30.3</b>	<b>21.9</b>
	1999	716	215	45	66	111	6	1048	30.0	15.5
	2000	792	251	60	63	123	8	1174	31.7	15.5
	2001	706	223	65	36	101	31	1061	31.6	14.3
	<b>Avg.</b>	<b>738</b>	<b>230</b>	<b>57</b>	<b>55</b>	<b>112</b>	<b>15</b>	<b>1094</b>	<b>31.2</b>	<b>15.2</b>

**NUMBERS OF VARIOUS CLASSES OF ELK** observed in Hunting District 121 near Thompson Falls on spring survey flights. The data from 1993-95 represent the population under an any-bull hunting regulation; the 1999-2001 data reflect the population under a brow-tined bull (BTB) only hunting regulation.



### **Survival Packets Donated for Hunter Education**

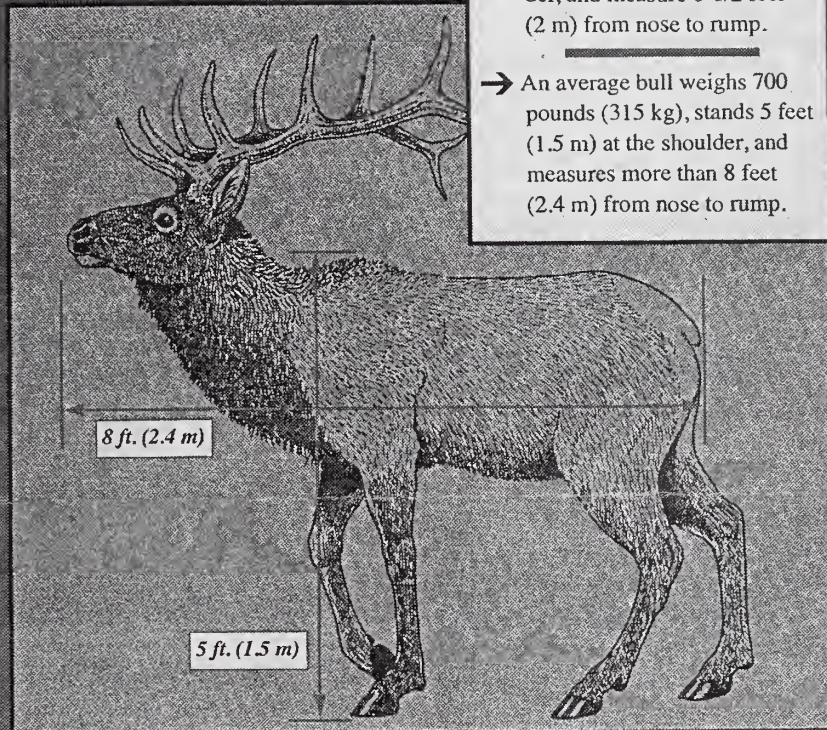
In an effort to better prepare young hunters for their outdoor experience, R-1 has begun a pilot program to provide students in the Hunter Education Program with materials that may better protect them in emergencies.

Beginning in the Eureka area this past spring, each student graduating from Hunter Education was given a survival kit that included an emergency shelter, two types of fire starting materials, a waterproof match container with striker, heat packets, a whistle, and a booklet on survival tips. Materials were donated by Gwynn Lumber, CanAm Search and Rescue, and Fish, Wildlife & Parks.

The shelter is a large, orange plastic bag that has a hole cut in one end for the user's face. Not only do the bags provide shelter, but are highly visible to searchers as well. Several area companies contributed to the purchase of these shelters. A huge thanks goes out to Lincoln Electric, Gwynn Lumber, Interbel Telephone and Plum Creek Timber Company for helping to make our young hunters safer. **THANK YOU!**

The survival packets will be used in Hunter Education programs around northwest Montana beginning this fall.

## **Born To Be BIG**




- At birth, an elk calf weighs about 35 pounds (16 kg) and can gain two pounds (one kg) a day for the first few weeks.
- At the start of its first winter, an elk may weigh five times as much as when it was born.
- Cow elk can weigh more than 500 pounds (225 kg), stand 4-1/2 feet (1.3 m) at the shoulder, and measure 6-1/2 feet (2 m) from nose to rump.
- An average bull weighs 700 pounds (315 kg), stands 5 feet (1.5 m) at the shoulder, and measures more than 8 feet (2.4 m) from nose to rump.

## **About the Montana Fish, Wildlife & Parks Commission**

The FWP Commission is the **decision body** that adopts changes to the hunting regulations. The Commission holds hearings around the state to collect public input on hunting seasons.

**Function:** The FWP Commission serves as the liaison between the public and FWP. Commissioners are appointed by the Governor. Commissioners set fishing and hunting seasons, bag limits, oversee land acquisition and special management areas, and set state parks fees and regulations. Montana's 5-member Commission was established in 1921.

**Commissioners:** Mike Murphy, District 1, Wolf Creek—Mike is the Commissioner for our area and his phone number is: 235-4512;

Tim Mulligan, District 2, Whitehall; John Lane, District 3, Cascade; Darlyne Dascher, District 4, Fort Peck; Dan Walker, District 5, Billings. 



**FWP Commissioner Mike Murphy (center) with his two sons on an elk hunt.**



# Elk Harvest Data

Each fall, biologists collect important information at a number of check stations around the region. At the check stations, workers measure antler growth, and jaw diastema length. They also estimate animal age, and extract a tooth from the harvested deer and elk to determine a more accurate age. This information helps FWP manage deer and elk herds.

The elk harvest chart shows information from five hunting districts that are a representative sample of Region One elk hunting areas. They were selected based on the range of elk hunting opportunities and each has a different level of elk harvest. Each of these districts has a different elk population structure and density. Also, each hunting district represents a different elk management unit as defined in the Elk Management Plan.


The pre brow-tined bull harvest data set (any bull was legal game) is from 1993 through 1995 (see chart). The brow-tined bull only harvest data set is a two-year time period consisting of the 1999 and 2000 hunting season. The 2001 harvest results have not been completed at this time. The table categories that are presented represent year, the number of hunters, overall percent successful, the number of cows, calves, and bulls harvested (bulls are broken down by antler point), the total bull and total harvest, the total number of hunter days spent hunting, the effort that is described by the number of days necessary to harvest an elk, and the percent of the bull harvest taken by bow hunters.

In all five of the hunting districts the total number of bulls harvested and the number of six-point or larger bulls has decreased over the last two years. But, in three of the five hunting districts the number of 3-5 point bulls (these are typically bulls two-three years old or

what is generally referred to as a rag-horn bull) harvested increased or stayed the same. Under the brow-tined bull only season the total bull harvest has decreased in HD 121 because spikes cannot be legally harvested. The harvest of rag-horn bulls has increased, in most cases, because the hunting pressure has shifted to harvesting of this age class. Also, archery hunters typically are able to call rag-horn bulls to close ranges more often than spikes.

If a hunter is going to find and harvest an elk, under the brow-tined bull only season, it is more than likely to be a bull in the two-three year old age class. This added pressure on the rag-horn bulls has probably resulted in fewer bulls living long enough to reach an older age class which, in turn, may be leading to the decrease in the number of 6 point or larger bulls that we have detected the hunter harvest trends. Remember, there are always fewer older aged class bulls in any elk population due to hunting and natural mortality. Also, it has always been and probably will always be

very difficult to harvest an old bull elk no matter what type of hunting season you have in any part of Montana.

We have observed that the percent hunter success has typically decreased in districts under the brow-tined bull only hunting regulation and that the number of hunters has decreased as well. This is probably due to the fact that north-west Montana is very difficult terrain to hunt and the brow-tined bull season is a restrictive type of season. Although the brow-tined bull only regulation is a popular elk hunting season type, the opportunity for hunters to be successful has decreased and when that typically happens the number of hunters can decrease as well. These hunters have probably either changed hunting locations or have potentially stopped elk hunting altogether. It is always important to recognize that there are costs and benefits to any elk hunting seasons type. Game management is an adaptive process and there will always be differing viewpoints. 



**CHECKING A MATURE ELK.** Biologist Bruce Sterling of Thompson Falls measures the antlers of a mature bull elk taken by a hunter during the 2001 hunting season.



# Elk Harvest Data

	Year	Hunters	% Succ.	Calf	Cow	1-2 pt. Bull	3-5 pt. Bull	6 pt. + Bull	Total Bull	Total Harv.	Hunter Days	Effort Days/Kill	% Bull Harv. With Bow
<b>HD 100</b> (Purcell Mountains)	1993	2825	5	9	38	32	41	21	94	141	19027	135	14
	1994	2538	7	3	52	58	27	26	111	166	17525	106	3
	1995	2843	6	13	61	32	28	24	84	158	20001	127	3
	<b>Avg.</b>	<b>2735</b>	<b>6</b>	<b>8</b>	<b>50</b>	<b>41</b>	<b>32</b>	<b>24</b>	<b>96</b>	<b>155</b>	<b>18851</b>	<b>123</b>	<b>7</b>
	1999	2297	3	3	15	0	32	21	53	70	15752	225	11.8
	2000	2070	4	1	15	5	48	24	77	93	14866	160	4.2
	<b>Avg.</b>	<b>2184</b>	<b>4</b>	<b>2</b>	<b>15</b>	<b>3</b>	<b>40</b>	<b>23</b>	<b>65</b>	<b>82</b>	<b>15309</b>	<b>193</b>	<b>8</b>
	1993	1600	5	0	31	17	25	10	52	83	8649	104	14
	1994	1308	5	3	7	16	12	31	59	69	9958	96	9
	1995	1202	5	0	11	23	10	20	53	64	7304	114	20
<b>HD 110</b> (No. Fork Flathead)	<b>Avg.</b>	<b>1370</b>	<b>5</b>	<b>1</b>	<b>16</b>	<b>19</b>	<b>16</b>	<b>20</b>	<b>55</b>	<b>72</b>	<b>8637</b>	<b>105</b>	<b>14</b>
	1999	858	1	0	0	0	8	0	8	8	4813	602	0
	2000	789	3	0	0	0	16	8	24	24	4989	208	14.3
	<b>Avg.</b>	<b>824</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>16</b>	<b>16</b>	<b>4901</b>	<b>405</b>	<b>7.2</b>
	1993	3391	13	28	174	80	107	36	223	425	24477	58	6
	1994	3393	17	43	183	98	129	122	349	578	23227	40	9
	1995	3453	9	18	125	80	57	36	173	316	25961	82	7
	<b>Avg.</b>	<b>3412</b>	<b>13</b>	<b>30</b>	<b>161</b>	<b>86</b>	<b>98</b>	<b>65</b>	<b>248</b>	<b>440</b>	<b>24555</b>	<b>60</b>	<b>7</b>
	1999	2092	7	4	52	3	61	34	98	155	15036	97	27.3
	2000	2271	10	5	92	0	56	64	120	217	16839	76	17.1
<b>HD 121</b> (West Clark Fork)	<b>Avg.</b>	<b>2182</b>	<b>9</b>	<b>5</b>	<b>72</b>	<b>2</b>	<b>59</b>	<b>49</b>	<b>109</b>	<b>186</b>	<b>15938</b>	<b>87</b>	<b>22.2</b>
	1993	1539	3	0	1	33	13	1	47	48	9001	188	2
	1994	2164	7	0	14	79	28	34	141	155	12475	80	6
	1995	2087	4	0	29	32	18	12	62	91	13691	150	14
	<b>Avg.</b>	<b>1930</b>	<b>5</b>	<b>0</b>	<b>15</b>	<b>48</b>	<b>20</b>	<b>16</b>	<b>83</b>	<b>98</b>	<b>11722</b>	<b>139</b>	<b>7</b>
	1999	1900	3	4	17	3	24	13	40	60	12228	204	0
	2000	1870	4	2	25	3	40	8	51	78	12255	157	6.3
	<b>Avg.</b>	<b>1885</b>	<b>4</b>	<b>3</b>	<b>21</b>	<b>3</b>	<b>32</b>	<b>11</b>	<b>46</b>	<b>69</b>	<b>12242</b>	<b>181</b>	<b>3.2</b>
	1993	1806	7	12	49	21	26	12	59	121	9624	80	5
	1994	1692	6	10	38	24	19	16	59	107	8873	83	5
<b>HD 140</b> (So. Fork Flathead)	1995	1303	5	0	23	6	21	19	46	68	7672	113	7
	<b>Avg.</b>	<b>1600</b>	<b>6</b>	<b>7</b>	<b>37</b>	<b>17</b>	<b>22</b>	<b>16</b>	<b>55</b>	<b>99</b>	<b>8723</b>	<b>92</b>	<b>6</b>
	1999	829	5	0	2	0	29	11	40	42	4207	100	18.2
	2000	674	3	0	0	0	11	10	21	21	3827	182	28.6
	<b>Avg.</b>	<b>752</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>20</b>	<b>11</b>	<b>31</b>	<b>32</b>	<b>4017</b>	<b>141</b>	<b>23.4</b>

THE ELK HARVEST AVERAGE in the mid-1990s (under an any-bull season) as compared to 1999/2000 (brow-tined bull only) illustrates the effects of the current brow-tined bull hunting regulation. The brow-tined bull regulation began in 1996.



# Youth Elk Hunt Is New Opportunity

At the February 2002 Commission meeting, the FWP Commission passed a new elk hunting regulation that allows new youth (12-14 years of age) hunting opportunity in both northwest Montana and other areas in central and southwestern Montana. Essentially, youth (12-14) may hunt elk as specified in general season dates for a legally defined bull or antlerless elk. This year's new hunting regu-


lations will list a separated elk season type under the general season for youth elk. Only one elk per hunter may be taken during the year. For Region One, elk hunting districts approved for this youth elk hunting season were chosen because of current population status or habitat security and include the following hunting districts:

HD 100 - Purcell Mountains north of Libby

HD 104 - Cabinet Mountain south of Libby

HD 121, 122, 123, and 124 - Lower Clark Fork River areas near Thompson Falls

HD 141 - Middle Fork of the Flathead River area east of Kalispell

HD 150 and 151 already have a general antlerless elk hunting season. 



**BIG CAT.** April Snell of Kalispell (above) bagged this 120 pound male mountain lion in the Thompson River area while on a hunt with her brother. April gave birth to a baby boy less than a month after bagging the lion.



**YOUNG HUNTERS** Brandy and Desiree Clarke of Kalispell (above right) stalked this antelope with their grandfather, Ted Clarke, in eastern Montana last Fall. The girls are wearing their Hunter Education vests donated by Flathead Electric Cooperative under their "Roundup for Safety" Program.

**FIRST ELK.** Shannon Vincent, 16, of Bigfork (right), is proud of her first elk, taken this past hunting season. Her father, FWP Supervisor Dan Vincent, accompanied her on the hunt.


(Send your Youth Hunting photos to Inside Tracks, 490 N. Meridian Road, Kalispell, MT 59901, identifying the people, place, and date on the back of each photo.)





# Hunter Education Instructors Mark 45 Years of Teaching



Hunter Education Instructors Bob Larsson of St. Ignatius, Pat Savage of Troy, and Pat McVay of Kalispell were honored for their service at a recent Hunter Education Instructors workshop in Kalispell. Each instructor has taught in the program for 45 years. Kalispell Instructor Pat McVay is recognized as Montana's first Hunter Education Instructor, certified Jan. 1, 1957. As hunters, we all honor their service and the hunting heritage they have helped preserve. 

**HONORED.** Pat Savage (left, above), and Bob Larsson have been teaching Hunter Education in Montana for 45 years. Pat and Bob were awarded 45-year certificates along with Pat McVay, recognized as Montana's first Hunter Education Instructor.

**SHOTGUN PRACTICE.** PAT McVay helps a young student at the shotgun station (right) at his March, 2002, field course. In the photo below, McVay directs students through a woods-walk course designed to emphasize safe gun handling around obstacles. McVay is assisted by Hunter Education Instructor Dennis Urban.

For the 46th year, McVay's students have taken part in firearms handling and live-firing exercises. This year, McVay had several students who were the sons or daughters of previous students.

McVay's students are wearing orange vests provided by Flathead Electric Cooperative through their "Roundup for Safety" program.





## FOOD FOR ELK



### SPRING

Elk graze on more than 70 kinds of grasses, depending on where they live.



### SUMMER

They'll continue to graze on grasses, but also will browse on more than 140 kinds of broad-leaved plants, tree leaves and twigs, and shrubs.



### AUTUMN

Along with shrubs and dried grass, some elk will eat mushrooms.

### WINTER

Elk usually browse this time of year, eating the twigs, bark, and needles of dozens of trees and shrubs. They'll also consume tree lichens.



## ELK TALK

Elk are among the noisiest ungulates, communicating danger quickly and identifying each other by sound.

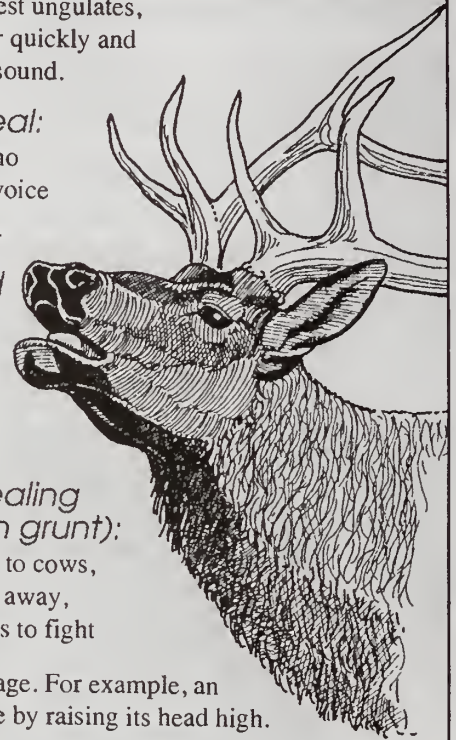
*High-pitched squeal:* Newborn to its mother, who recognizes her calf by its voice

*Bark:* Warning of danger

*Chirps, mews, and miscellaneous squeals:* General conversation among the group

*Bugling (bellow escalating to squealing whistle ending with grunt):* Bull advertising his fitness to cows, warning other bulls to stay away, or announcing his readiness to fight

Elk also use body language. For example, an elk displays dominance by raising its head high.



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